

Appl. No. 10/708,642  
Amdt. dated April 13, 2006  
Reply to Office action of February 13, 2006

**Amendments to the Claims:**

1. (Previously presented) A front-end array process for making a liquid crystal display panel, comprising:
  - 5 depositing a molybdenum-containing metal layer on a glass substrate;  
forming a patterned photoresist on said molybdenum-containing metal layer,  
wherein said patterned photoresist defines a gate and word line array pattern;  
and  
using said patterned photoresist as an etching mask, uniformly etching said  
10 molybdenum-containing metal layer to form said gate and word line array  
pattern having substantially oblique sidewalls, wherein said etching of said  
molybdenum-containing metal layer uses gas mixture.
2. (Original) The front-end array process for making a liquid crystal display panel  
15 according to claim 1 wherein after said etching of said molybdenum-containing metal  
layer, an over etching is carried out.
3. (Previously presented) The front-end array process for making a liquid crystal  
display panel according to claim 1 wherein fluorine/oxygen containing gas mixture is  
20  $\text{SF}_6/\text{O}_2$  having a ratio of about 700sccm/300sccm.
4. (Original) The front-end array process for making a liquid crystal display panel  
according to claim 1 wherein said etching of said molybdenum-containing metal layer is  
executed under a process pressure higher than 25 mTorr.
- 25 5. (Original) The front-end array process for making a liquid crystal display panel  
according to claim 1 wherein said etching of said molybdenum-containing metal layer is

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further controlled by a source power, a bias power, process pressure, oxygen flowrate and flowrate of fluorine containing gas.

- 5 6. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said molybdenum-containing metal layer is a dual-metal layer.
- 10 7. (Previously presented) The front-end array process for making a liquid crystal display panel according to claim 6 wherein said dual-metal layer is Mo/AlNd, MoW/AlNd, or MoW/Al, wherein Mo and MoW are top layers, while AlNd and Al are bottom layers.
- 15 8. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said etching of said molybdenum-containing metal layer is detected by an end-point detection method at an wavelength of about 704nm.
9. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said gas mixture is oxygen/fluorine containing.
- 20 10. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said gas mixture is oxygen/chlorine containing.
- 25 11. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said gas mixture is oxygen/chlorine/fluorine containing.
12. (Original) The front-end array process for making a liquid crystal display panel according to claim 1 wherein said gas mixture is SiF<sub>4</sub>/O<sub>2</sub> containing.

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13. (Currently amended) A front-end array process for making a liquid crystal display panel, comprising:  
depositing a molybdenum-containing metal layer on a glass substrate;  
5 forming a patterned photoresist and defining a gate and word line array pattern on said molybdenum-containing metal layer; and  
etching said molybdenum-containing metal layer by using fluorine/oxygen containing gas mixture containing  $\text{SF}_6/\text{O}_2$  with a ratio of about 700sccm/300sccm, and using said patterned photoresist as an etching mask to  
10 form said gate and word line array pattern.
14. (Previously presented) The front-end array process for making a liquid crystal display panel according to claim 13 wherein said gate and word line array pattern have substantially oblique sidewalls.  
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15. (Original) The front-end array process for making a liquid crystal display panel according to claim 13 wherein after said etching of said molybdenum-containing metal layer, an over etching is carried out.
- 20 16. (Canceled)
17. (Original) The front-end array process for making a liquid crystal display panel according to claim 13 wherein said etching of said molybdenum-containing metal layer is executed under a process pressure higher than 25 mTorr.  
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18. (Original) The front-end array process for making a liquid crystal display panel according to claim 13 wherein said etching of said molybdenum-containing metal layer is detected by an end-point detection method at an wavelength of about 704nm.

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19. (Original) The front-end array process for making a liquid crystal display panel according to claim 13 wherein said molybdenum-containing metal layer is a dual-metal layer.

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20. (Previously presented) The front-end array process for making a liquid crystal display panel according to claim 19 wherein said dual-metal layer is Mo/AlNd, MoW/AlNd, or MoW/Al, wherein Mo and MoW are top layers, while AlNd and Al

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